

WHAT IS CLAIMED IS:

1. A rotary electric machine comprising:  
a stator core having a plurality of slots; and  
a multi-phase winding including a plurality of phase  
windings wound in the slots at predetermined angular intervals,  
wherein one end of one of the phase windings is  
connected to a middle point other than both ends of another one  
of the phase windings in a cyclic manner among the phase windings.

2. The rotary electric machine according to Claim 1,  
wherein:

the multi-phase winding has a plurality of electric  
conductor segments connected in series; and

each of the slots receives therein generally a same  
number of the conductor segments.

3. The rotary electric machine according to Claim 1,  
wherein the multi-phase winding includes two sets of three-phase  
windings having a phase difference of  $\pi/6$  in an electric angle  
from each other.

4. The rotary electric machine according to Claim 2,  
wherein the electric conductor segments are connected together  
through respective end portions.

5. The rotary electric machine according to Claim 4,  
wherein the electric conductor segments each has a rectangular

sectional shape.

5 6. The rotary electric machine according to Claim 5, wherein the electric conductor segments each has a substantially same sectional shape.

7. The rotary electric machine according to Claim 1, further comprising:

10 a rectifier device for rectifying voltages induced in the multi-phase winding,

wherein another end of each of the phase windings is connected to the rectifier device.

15 8. A rotary electric machine comprising:

a multi-phase winding including a plurality of phase windings, one end of each of the phase windings is connected to a mid-point of another of the phase windings to form a  $\Delta$ -connection of the phase windings; and

20 a rectifier device connected to another end of each of the phase windings.

9. The rotary electric machine according to claim 8, further comprising:

25 a stator core having a plurality of slots for receiving the multi-phase windings therein,

wherein each of the phase windings includes a plurality of electric conductor segments connected in series with, and

wherein a number of the electric conductor segments received in each of the slots is fixed to an integer number.

10. A rotary electric machine comprising:

a stator core having a plurality of slots;

a multi-phase winding including a plurality of phase windings received in the slots, a number of turns of each of the phase windings in each of the slots being fixed to an integer number; and

a rectifier device connected to the phase windings,

wherein the phase windings are connected to one another in a predetermined form of a Y-connection and a  $\Delta$ -connection to provide an output which is intermediate between two outputs which the rectifier device provides when the phase windings are connected in the Y-connection and the number of turns in each slot is fixed to the integer number and another integer number less than the integer number by one.